

Editorial

Identification and treatment of patients with atrial fibrillation in primary care

Atrial fibrillation is the most common cardiac arrhythmia. The principal significance of atrial fibrillation, both to patients and health care systems, is the fivefold increased risk of embolic stroke.¹ Atrial fibrillation is associated with 15% of all strokes² and with 36% of strokes in patients older than 80.

Renewed interest in atrial fibrillation has followed publication of randomised controlled trials showing that anticoagulation is effective in decreasing this risk of stroke.^{3–7} The effect size for warfarin is huge with a 68% relative risk reduction for stroke in the primary prevention trials, with annual stroke risk reduced from 4.5% to 1.4% and number need to treated (NNT) for one year of 32.⁸ In secondary prevention the effect size is even greater with a 66% relative risk reduction, annual risk reduction from 12% to 4%, and NNT for one year of only 12.⁹ The data on aspirin are less impressive, with the 21% risk reduction only just reaching significance.¹⁰ Reliable data on the newer antithrombotics in atrial fibrillation are not currently available.

Reductions in stroke risk not only have obvious benefits to patients; stroke has a high cost to all health care systems with 1000 new cases per 500 000 population per year, expending around 5% of National Health Service resources in the UK.

To maximise health gain, the first essential step is to identify patients with atrial fibrillation and determine who would have most to gain from anticoagulation. Inevitably, this will involve a substantial role for the primary care physician as most patients with atrial fibrillation are based in the community without specialist follow up. Unfortunately, the condition is often unrecognised by both clinicians and patients. In one population based survey of patients over 65 in northern England, only 76% of patients with atrial fibrillation were known to their family doctor.¹¹ In a similar large study involving electrocardiographic screening in central England, only 31% of patients with atrial fibrillation were recognised (Hobbs FDR. *Consensus conference on the management of atrial fibrillation*. Royal College of Physicians of Edinburgh, Edinburgh, 1998). These studies also provide an estimate of the numbers of patients who may need to be considered for anticoagulation as current rates of warfarin use in identified atrial fibrillation patients were between 25%¹¹ and 50% (Hobbs FDR. *Consensus conference on the management of atrial fibrillation*. Royal College of Physicians of Edinburgh, Edinburgh, 1998). Therefore, based on current levels of underdiagnosis and possible underanticoagulation, the UK might see up to a fivefold increased use of warfarin in atrial fibrillation, assuming all patients identified are deemed appropriate for anticoagulation. It is estimated on Scandinavian data that the costs of such anticoagulation would be repaid by the costs of the strokes averted.¹²

However, these data do not take account of some of the unanswered questions around atrial fibrillation. The first is how far current underutilisation of warfarin by primary care physicians is appropriate? Despite the evidence on treatment benefits, concerns continue over how widely the data from the highly selected hospital populations used in the treatment trials are relevant to the undifferentiated and

largely elderly patients seen in primary care.^{13 14} Practising clinicians, who are more likely to be influenced in management decisions by treatment risks above treatment benefits,¹⁵ may underutilise anticoagulation by believing that studies have overestimated the size of treatment effect and underestimated treatment risks. In the case of anticoagulation, physicians overestimate the risk of haemorrhage in patients on warfarin.^{16 17} Such fears not only influence primary care practice; similar concerns among hospital specialists contribute to only 37–60% uptake of warfarin in eligible patients in US hospital practice.^{18–22} Overemphasis of treatment risk is also a factor in primary care underuse of angiotensin converting enzyme inhibitors in heart failure.^{16 23}

Uncertainties over atrial fibrillation treatment strategies particularly relate to patients over 75, in whom anticoagulation may be more hazardous. Further trials are needed to identify the ideal international normalised ratio (INR) target range for such patients—for example, a target INR range of 1.6–2.5 has yet to be tested in a clinical trial.

Further unanswered questions relate to screening for atrial fibrillation. The ideal method of screening has yet to be evaluated. Palpation of pulse by trained nurses in primary care has a high sensitivity but a low positive predictive value of 8–23%.²⁴ Pulse measurement may therefore prove an appropriate filter to determine patients requiring further investigation in whatever programme of atrial fibrillation screening that emerges.

In terms of stratifying atrial fibrillation patients' suitability for anticoagulation, the role of echocardiography is yet to be prospectively assessed. On the basis of the SPAF 3 (stroke prevention in atrial fibrillation) data,²⁵ the only independent contribution made by echocardiography appears to be assessment of ventricular function. Preliminary data suggest that in routine practice the use of echocardiography would add little to the decision over need for anticoagulation.²⁶ Applying SPAF 3 clinical indications for anticoagulation to two UK studies reveals minimal additional information is gained from echocardiography. In one study only one of 127 patients over 65 had an echocardiographic risk factor but no clinical indication²⁷; and in the second study, only 3% of patients over 45 years had (borderline) abnormalities on echocardiography in the absence of another clinical indication for anticoagulation, namely ejection fractions of 40–50%.²⁸

The final major issue to be determined in management of atrial fibrillation is, once anticoagulated, whether primary care can offer reliable monitoring of INR.²⁹ Recent UK data showed that the use of computerised decision support software alongside a near-patient test for INR can result in significant improvements of INR control in primary care clinics compared to routine hospital follow up,^{30 31} with results persisting in routine practice outside the trial.³² Such data are important as, if anticoagulation of atrial fibrillation patients is to increase substantially, varied methods of reliable warfarin monitoring will be needed.

The increased evidence base on atrial fibrillation management has helped to focus more attention on the importance of the problem. However, as long as uncertainties remain over which patients with atrial fibrillation have

most to gain from anticoagulation, and how this stratification should be determined, it is likely that clinicians will continue to be seen to underperform. In the meantime, clinical guidelines on the topic should emphasise those recommendations that are unequivocal and those for which additional evidence is awaited.

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STAMPS IN CARDIOLOGY

Phonocardiography



This is the only stamp we have found with a phonocardiogram. The recording shows a late systolic click. It was issued by Bulgaria in 1994 to commemorate the work of Dr Ivan Mitev who described the abnormal sound as the “6th tone”.

Systolic clicks have been recognised since 1887 when Cuffer and Barbillon reported a “bruit de galop mesosytolique”. J N Hall in 1903 and Paul D White in 1931 ascribed late systolic murmurs or clicks as caused by mitral valve dysfunction in opposition to the view of Louis Gallavardin in 1913 that clicks were caused by pleuropericardial adhesions. John Reid in 1961 was the first to state that clicks arose from the mitral chordae—chordal snap. The extensive work by John Barlow in Johannesburg identified many features of non-ejection systolic clicks and late mitral systolic murmurs and his contributions are recognised in the term “Barlow’s syndrome”.

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